rancid, moldy, decayed or injured by insects: *And provided further*, That included in this 7 percent tolerance not more than one-half of one percent shall be allowed for pecans with live insects inside the shell.

(3) For loose extraneous or foreign material, by weight. (i) 0.5 percent (one-half of 1 percent).

APPLICATION OF TOLERANCES

## §51.1405 Application of tolerances.

Individual 100-count samples shall have not more than one and one-half times a specified tolerance of 5 percent or more and not more than double a tolerance of less than 5 percent, except that at least one pecan which is seriously damaged by live insects inside the shell is permitted: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade.

SAMPLE FOR GRADE OR SIZE
DETERMINATION

# §51.1406 Sample for grade or size determination.

Each sample shall consist of 100 pecans. The individual sample shall be drawn at random from a sufficient number of packages to form a 100-count composite sample. The number of such individual 100-count samples drawn for grade or size determination will vary with the size of the lot. When practicable, at point of packaging the sam-

ple may be obtained from the grading belt after sorting has been completed.

#### **DEFINITIONS**

### §51.1407 Fairly uniform in color.

Fairly uniform in color means that the shells do not show sufficient variation in color to materially detract from the general appearance of the lot.

## §51.1408 Loose extraneous or foreign material.

Loose extraneous or foreign material means loose hulls, empty broken shells, or any substance other than pecans in the shell or pecan kernels.

#### §51.1409 Well developed.

Well developed means that the kernel has a large amount of meat in proportion to its width and length (see Figure 1)

## §51.1410 Fairly well developed.

Fairly well developed means that the kernel has at least a moderate amount of meat in proportion to its width and length. Shriveling and hollowness shall be considered only to the extent that they have reduced the meatiness of the kernel (see Figure 1).

### §51.1411 Poorly developed.

*Poorly developed* means that the kernel has a small amount of meat in proportion to its width and length (see Figure 1).

## PECAN CROSS SECTION ILLUSTRATION



## WELL DEVELOPED

Lower limit. Kernels having less meat content than these are not considered well developed.



## 2. FAIRLY WELL DEVELOPED

Lower limit for U.S. No. 1 grade. Kernels having less meat content than these are not considered fairly well developed and are classed as damaged.



## 3. POORLY DEVELOPED

Lower limit, damaged but not seriously damaged. Kernels having less meat content than these are considered undeveloped and are classed as seriously damaged.

FIGURE 1

#### §51.1412 Well cured.

Well cured means that the kernel separates freely from the shell, breaks cleanly when bent, without splintering, shattering, or loosening the skin; and the kernel appears to be in good shipping or storage condition as to moisture content.

#### §51.1413 Damage.

Damage means any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which materially detracts from the appearance or the edible or marketing quality of the individual pecan or the general appearance of the pecans in the lot. The following defects shall be considered as damage:

- (a) Adhering hull material or dark stains affecting an aggregate of more than 5 percent of the surface of the individual shell;
- (b) Split or cracked shells when the shell is spread apart or will spread upon application of slight pressure;
- (c) Broken shells when any portion of the shell is missing;
  - (d) Kernels which are not well cured;
  - (e) Poorly developed kernels;
- (f) Kernels which are dark amber in color;
- (g) Kernel spots when more than one dark spot is present on either half of the kernel, or when any such spot is more than one-eighth inch (3 mm) in greatest dimension;
- (h) Adhering material from the inside of the shell when firmly attached to more than one-third of the outer surface of the kernel and contrasting in color with the skin of the kernel; and,
- (i) Internal flesh discoloration of a medium shade of gray or brown extending more than one-fourth inch (6 mm) lengthwise beneath the center ridge, or any equally objectionable amount in other portions of the kernel; or lesser areas of dark discoloration affecting the appearance to an equal or greater extent.

## §51.1414 Serious damage.

Serious damage means any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other de-

fect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the individual pecan. The following defects shall be considered as serious damage:

- (a) Adhering hull material or dark stains affecting an aggregate of more than 20 percent of the individual shell;
- (b) Broken shells when the missing portion of shell is greater in area than a circle one-fourth inch (6 mm) in diameter;
- (c) Worm holes when penetrating the shell;
- (d) Rancidity when the kernel is distinctly rancid to the taste. Staleness of flavor shall not be classed as rancidity;
- (e) Mold, on the surface or inside the kernel, which is plainly visible without magnification;
- (f) Decay affecting any portion of the kernel;
- (g) Insect injury when the insect, web or frass is present inside the shell, or the kernal shows distinct evidence of insect feeding;
- (h) Kernel spots when more than three dark spots on either half of the kernel, or when any spot or the aggregate of two or more spots on one of the halves of the kernel affects more than 10 percent of the surface;
- (i) Dark discoloration of the skin which is darker than dark amber over more than 25 percent of the outer surface of the kernel:
- (j) Internal flesh discoloration of a dark shade extending more than one-third the length of the kernel beneath the ridge, or an equally objectionable amount of dark discoloration in other portions of the kernel; and,
- (k) Undeveloped kernels having practically no food value, or which are blank (complete shell containing no kernel).

### §51.1415 Inedible kernels.

Inedible kernels means that the kernel or pieces of kernels are rancid, moldy, decayed, injured by insects or otherwise unsuitable for human consumption.